## **CLAIMS**

The invention claimed is:

1. A method in a healthcare information technology system for inferring genetic findings for a person, the method comprising:

receiving a request for genetic findings for a person;

in response to the request, determining if the person has actual genetic findings, and

if the person does not have actual genetic findings, automatically providing inferred genetic findings for the person.

- 2. The method of claim 1, wherein the step of determining if the person has stored genetic findings comprises searching the electronic medical record for the person.
- 3. The method of claim 1, wherein the request is initiated by a decision support rule.
  - 4. The method of claim 1, further comprising:

    obtaining the traversal pattern for the genetic findings requested.
  - 5. The method of claim 4, further comprising:

    inquiring whether at least one family member of the person within the traversal pattern has the genetic findings.
  - 6. The method of claim 5, further comprising:

utilizing the genetic findings for the one or more family members to provide an inferred genetic finding for the person.

- 7. The method of claim 6, wherein the genetic findings for the one or more family members are obtained from an electronic medical record for each family member stored within a comprehensive healthcare system.
  - 8. The method claim 1, further comprising:
    obtaining cytogenetic observations for the person.
  - 9. The method of claim 8, further comprising:

    utilizing the cytogenetic observations to provide the inferred genetic findings for the person.
  - 10. The method of claim 1, further comprising:

    obtaining demographic information for the person.
  - 11. The method of claim 10, further comprising:

    utilizing the demographic information for the person to provide the inferred genetic findings for the person.
  - 12. The method of claim 1, further comprising:

    obtaining genetic marker information for the person.
  - 13. The method of claim 12, further comprising:

    utilizing the genetic marker information for the person to provide inferred genetic findings for the person.

- 14. The method of claim 1, wherein the system communicates the inferred results to a user.
  - 15. The method of claim 12, further comprising:

obtaining the traversal pattern for the genetic findings requested; and

inquiring whether at least one family member of the person within the traversal pattern has the genetic findings and any genetic markers.

16. The method of claim 15, further comprising:

utilizing the genetic marker information for the person, the genetic findings for the one or more family members and the genetic markers for the one or more family members to provide inferred genetic findings for the person.

17. A method in a computer system for inferring genetic findings for a person, the method comprising:

receiving a request for actual genetic findings for one or more genes for a person;

determining if the person has stored genetic findings, and if the person does not stored genetic findings, automatically providing inferred genetic findings for the person.

18. The method of claim 17, wherein the step of determining if the person has stored genetic findings comprises searching the electronic medical record for the person.

- 19. The method of claim 17, wherein the request for actual genetic findings is from a user.
  - 20. The method of claim 17, further comprising:
    obtaining the traversal pattern for the genetic findings requested.
  - 21. The method of claim 20, further comprising:

    inquiring whether at least one family member of the person within the traversal pattern has the genetic findings.
  - 22. The method of claim 21, further comprising:

    utilizing the genetic findings for the one or more family members
    to provide an inferred genetic finding for the person.
- 23. The method of claim 22, wherein the genetic findings for the one or more family members are obtained from an electronic medical record for each family member stored within a comprehensive healthcare system.
  - 24. The method claim 17, further comprising:
    obtaining cytogenetic observations for the person.
  - 25. The method of claim 24, further comprising:

    utilizing the cytogenetic observations to provide the inferred genetic findings for the person.
  - 26. The method of claim 17, further comprising: obtaining demographic information for the person.

27. The method of claim 26, further comprising:

utilizing the demographic information for the person to provide the inferred genetic findings for the person.

28. The method of claim 17, further comprising:

obtaining genetic marker information for the person.

29. The method of claim 28, further comprising:

utilizing the genetic marker information for the person to provide inferred genetic findings for the person.

30. The method of claim 28, further comprising:

obtaining the traversal pattern for the genetic findings requested and

inquiring whether at least one family member of the person within the traversal pattern has the genetic findings and genetic markers.

31. The method of claim 30, further comprising:

utilizing the genetic marker information for the person, the genetic findings for the one or more family members and the genetic markers for the one or more family members to provide inferred genetic findings for the person.